INCOME TAXES AND MEDICAL EXPENSES

Miguel Gouveia, FCEE, Portuguese Catholic University*
Robert P. Strauss, Heinz School of Public Policy, Carnegie-Mellon University

TAXATION IS WIDELY BELIEVED TO AFFECT HEALTH expenditures and health care provision patterns in the United States[1] and in other countries where its impact on health expenditures has been studied.[2] The main features of the U. S. tax system relevant for the health care sector are the tax deductibility of employer provided health insurance for the purposes of corporate, personal, and payroll taxes. It has been examined extensively in a literature surveyed by CBO (1994) and Gruber (2001). Other studies have dealt with the personal income tax deductions for the purchase of health insurance by the self-employed, such as Gruber and Poterba (1994). Additional provisions of the tax code that affect health care have been analyzed, including cafeteria plans and medical savings accounts.

Another, continuing feature of the U. S. individual income tax system that affects health expenditures seems to have been neglected by economists, namely the deduction of medical expenses under the personal income tax. Since 1942 the U. S. individual income tax has allowed taxpayers who itemize deductions to deduct unreimbursed health expenditures above a given percentage of Adjusted Gross Income (AGI) against gross income in arriving at taxable income.

This feature of the U. S. tax system turns it into a catastrophic health insurance plan, since these deductions reduce taxes for taxpayers who sustain relatively large health costs. Moreover, there is a unique characteristic of this scheme that we rarely observe in typical commercial insurance: the deductible level is income related. This turns out to be useful for research purposes as it generates additional variation that can be used to help identify the effects of key policy parameters on the deduction behavior.

Why is research on medical expenses deductibility relevant? In aging democracies, there are constant pressures to change the tax treatment of health care. The Health Savings Account included in the legislation approved in 2003 is just the latest of a series of changes that started with the Tax Reform Act of 1986. Both for government and health industry institutions, it is useful to have a better idea about the implications of changing the tax law with respect to behavior, consumption of health care, and the tax revenue impact. This specific concern is more relevant now because of the recent trend to adopt schemes that limit moral hazard by consumers and lead to instruments such as health savings accounts and more generally toward consumer-directed health care plans. These instruments need to be complemented by catastrophic health insurance if they are to be appealing.

The personal income tax features already described fit nicely in this picture, and it would not be surprising if legislators decided to change the tax system to increase its role as a supplemental catastrophic health insurance plan. Health savings accounts should have no demand side moral hazard problems for low expenditures, but what happens when these are higher and over the deductible?

Other possibilities that have been raised include the use of the tax system as the appropriate vehicle to address health coverage and access issues through income tax credits and selective lower AGI limits, either as health policy instruments to decrease the number of people uninsured or as a tool to provide relief for the medical expenses of uninsured households. Some advocates of health reform through changes in the tax system, such as Cogan, Hubbard and Kessler (2004), claim that it can increase coverage and reduce health expenditures.[3] What are the effects of lowering the deductible/AGI limit? What are the effects of using tax credits (at arbitrary rates) rather than deductions to income?

These substantive policy questions need to be informed by research on the sensitivity of health expenditures and health deductions with respect to income tax parameters and personal characteristics: How do observed health deductions change with their tax price (i.e., the net price when tax deductibility is taken into account)? How do the AGI

limits affect health deductions? How do these tax parameters affect health expenditures?

In this paper we review the how the medical expense deduction under the U. S. personal income tax has changed over the years, and report some key statistically estimated elasticities that can address a number of the questions raised above. We also report some findings from recent research on theses deductions using data from the U. S. and Canada.

MEDICAL EXPENSES: RULES AND DATA

Taxpayers who choose to forgo the standard deduction and itemize can deduct their own health insurance costs and unreimbursed medical expenses if they corresponded to deductible health care expenditures (inpatient care, doctor visits, procedures, treatments, diagnostics, prescription drugs and insulin, etc.) and associated travel and lodging expenses allowed under Section 213 of the Internal Revenue Code.[4]

Only the amounts over a given percentage of Adjusted Gross Income (AGI) generally have been deductible. The exception to this rule was that until 1982 taxpayers could deduct half of their health insurance up to $150. From 1954 through 1982, the floor under the medical expense deduction was 3 percent of AGI. The Equity and Fiscal Responsibility Act of 1982 changed the floor to 5 percent, and the Tax Reform Act of 1986 set the floor at 7.5 percent, where it has stayed ever since.

Until 1983, prescription drugs had special tax treatment because only the expenses on prescription drugs over one percent of AGI could be added to the other medical expenses to generate the deduction. After 1983, probably because of the AGI floor increase, the entire unreimbursed drug expense started to count for the deduction.

Table 1 provides a synthesis of the main rules about medical expense deductions of the federal individual income tax in the 1980's.[5] One interesting feature of these medical deductions, particularly when the Alternative Minimum Tax is attracting so much attention, is that they are not included in the AMT limitations on itemized deductions applicable to taxpayers with large AGIs.

Given that the deduction rules and parameters have changed substantially in the course of the tax reforms that occurred in the 1980s, it is not surprising that a table with aggregate data shows larges changes in the frequency of the use of these deductions as well as in the dollar amounts involved. Table 2 displays that evidence from the Statistics of Income microfiles. Note that the percentage of total returns with medical expense deductions went from slightly over a quarter to less that 5 percent over the decade.[6] This cannot be explained just by a decline in the proportion of itemized returns in total returns because the proportion of itemized returns with medical expenses dropped from over 50 percent to about 15 percent.[7]

The dollar amount of medical expense deductions as proportion of itemized deductions fell

Table 1
Medical Expense Deductions and the Income Tax:
Basic Features and Changes in the 1980's

Year	AGI Floor %	Marginal Tax Rates	Other Rules	Deduction Amount
1980	3.0	14 up to 70%	Separate prescription drugs (over 1% AGI), Max (Exp-3%AGI,0) + min(_ HI, 150)	
1981	3.0	13.825 up to 69.125%	Separate prescription drugs (over 1% AGI), Max (Exp-3%AGI,0) + min(_ HI, 150)	
1982	3.0	12 to 50%	Separate prescription drugs. (over 1% AGI), Max (Exp-3%AGI, min(_ HI, 150))	
1983	5.0	11 up to 50%	Separate prescription drugs (over 1% AGI), Max (Exp-5%AGI,0)	
1984	5.0	11 to 50%	All added.	Max (Exp-5%AGI,0)
1985	5.0	11 to 50%	All added	Max (Exp-5%AGI,0)
1986	5.0	11 to 50%	All added	Max (Exp-5%AGI,0)
1987	7.5	11 up to 38.5%	All added	Max (Exp-7.5%AGI,0)
1988	7.5	15 up to 35%	All added	Max (Exp-7.5%AGI,0)
1989	7.5	15 up to 35%	All added	Max (Exp-7.5%AGI,0)

Notes: Exp-medical expenses; AGI- Adjusted Gross Income; HI- Health Insurance deduction.

Table 2
Frequency and Amounts of Medical Deductions

Year	Medical Deductions % Aggregate Income	Medical Expenditures % Aggregate Income	Returns with Medical Deductions As % all Returns	% Returns Itemized	Medical Deductions as % of all item ded. ($)	Returns with Medical Deductions as % all itemized returns
1980	0.64	1.18	25.06	48.58	3.92	51.58
1981	0.95	1.71	22.2	33.17	6.97	66.91
1982	1.08	1.92	23.18	35.26	7.57	65.75
1983	0.84	1.76	9.95	36.74	5.81	27.08
1984	0.89	1.45	10.74	38.51	5.99	27.9
1985	0.88	1.7	10.6	39.2	5.66	27.05
1986	0.87	1.6	10.23	39.47	5.62	25.92
1987	0.58	0.94	5.01	33.3	4.38	15.03
1988	0.55	0.87	4.38	29.08	4.55	15.08
1989	0.61	0.95	4.57	28.49	4.87	16.05

Source: SOI 1980-1989 and authors' calculations.

during the 1980s, and has stabilized since then at levels just under 5 percent of total itemized deductions. This fall is much smaller than the one in the proportion of returns with medical expenses, leading to the conclusion that, even though less people are claiming that deduction, the per capita amounts involved have increased faster than for other itemized deductions.

MEDICAL EXPENSES DEDUCTIONS: QUESTIONS AND ELASTICITY ESTIMATES

The aggregate data for the 1980s is evidence that changes in the AGI limit have had a large impact on medical expense deductions frequency and amount. But there are other forces at work. During the 1980s, marginal tax rates decreased substantially, which in turn materially affects the value of the medical expense deduction. If we think of the individual income tax as a health insurance scheme, then it may be that the drop in the number of people claiming deductions is due not only to the increase in the deductible amount but also to an increase in the net-of-tax price of medical expenses. Since medical expense deductions are an alternative form of insurance to formal insurance schemes, a decrease in tax rates and the corresponding increase in the net of tax price of medical deductions can also be seen as lowering the relative price of obtaining explicit health insurance versus the implicitly tax provided health insurance. For tax purposes, this leads to an increase in the amount of reimbursed health expenditures that are not deductible for income tax purposes.

To the extent that other forms of insurance are not easily available to some taxpayers, the fall in marginal tax rates constitutes a de facto increase in the price of health care. Both this and the relative price of insurance arguments lead to the idea that part of the drop in medical deductions may be due to price effects rather than just to deductible changes.

There are, however, several reasons to believe that individuals could be less sensitive to changes in the price of health spending when they pay for those services when the annually compute their taxes or receive their refund than at the time of use. Individuals could just be myopic and heavily discount the future or they could be irrational or unable to see through the administrative complexities of both the tax and the health care system. Alternatively, individuals could be under liquidity constraints severe enough that a tax credit a few months later, even if anticipated, would not lead to changes in behavior.

Ultimately, whether the price effects of changes in tax rates are relevant and also help explain changes in medical deductions is an empirical question. Naturally, in order to disentangle the price effects from the deductible effects due to raising the AGI limits, one must use an econometric model that also takes into account changes in incomes as well in a large set of other confounding variables.

We now report some results concerning U. S. data taken from ongoing work,[8] as well as some results in Smart and Stabile (2003) using Canadian data.

We obtained results for the U. S. using two expenditure categories: prescription drugs and overall medical expenditure deductions. Prescription drugs constitute a fairly homogeneous expenditure category, and the subset of years with separate data available (1980-1983) have relatively stable rules governing those deductions apart from changes in the marginal tax rates and the AGI floor. The main results obtained in our preliminary analysis were an income elasticity for drug deductions of 0.11, a tax price elasticity of -0.6, and a -0.72 elasticity with respect to the AGI floor. The results for overall medical deductions were obtained using data from 1980 to 1989. The estimated income elasticity was 0.37, the tax price elasticity was essentially –1, and the elasticity with respect to the AGI limit was large, –2.26. All estimates are statistically significant from zero at high confidence levels.

These findings indicate that taxpayers' medical deductions are quite responsive to tax policy parameters. They should be taken into account when thinking about using tax policy instruments for health policy goals.

Smart and Stabile (2003) use both household expenditure data and tax data to estimate tax-price elasticities. They do not report explicit income elasticities or deductible elasticities, but find an elasticity of demand for prescription drugs of –0.32, slightly smaller than our estimates for the U. S. For all health care expenditures, they find a price elasticity of –1.08, a value remarkable close to our estimate for the U. S.

Overall, these estimates for the price elasticity do not deviate substantially from one another or from the "classic" estimates that come from the Rand Health Insurance Experiment described in Newhouse (1993).

CONCLUSION

The results already available, while preliminary in nature, indicate that individual income tax parameters have significant effects in the amounts and frequency of medical deductions. While that result could be easily anticipated for the AGI limit looking at aggregate data, we have also provided results based on U. S. and Canadian data showing that price effects are important. This information needs to be considered when studying policy proposals that use the tax system as an instrument to achieve health policy objectives.

Notes

[1] See Section 13 of the *Green Book*, 2004 (Committee on Ways and Means, U. S. House of Representatives), for a list of health-related tax provisions and their significance.

[2] See OECD (1997) for data on health related tax expenditures in some OECD countries.

[3] J. F. Cogan, R. Glenn Hubbard and D. P. Kessler (2004) argue that extending the individual income tax health deductions will increase the relative price of low deductible employer provided insurance policies and that this will result in a net effect lowering aggregate moral hazard.

[4] The deduction includes both direct health care costs and health insurance costs, so it does not change the relative price of insured versus uninsured health care. Since the deduction works as an insurance mechanism, however, it may change the demand for other types of health insurance.

[5] Pechman (1987) summarizes historical information on the federal individual income tax.

[6] More recent data can be seen at the web site of the Tax Policy Center, www.taxpolicycenter.org.

[7] The following elasticities are estimated in Gouveia and Strauss (2004). That paper covers methodological questions that cannot be treated here.

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